



1002082

## UNDERGROUND INJECTION CONTROL (UIC)

## CONTINUING RELEASES/CORRECTIVE ACTION PERMIT RIDER

Name of Permittee Allied Chemical CorporationFacility Location Danville, IllinoisEPA identification Number ILD005463344State UIC Permit Numbers UIC-003-W1-AC

Expiration Date \_\_\_\_\_

## BACKGROUND

The UIC program for Class I hazardous waste injection wells is jointly authorized by the Safe Drinking Water Act (SDWA) and the Resource Conservation and Recovery Act (RCRA). By amendments to RCRA enacted on November 8, 1984, Congress imposed many new requirements, including certain new requirements for Class I hazardous waste wells. Class I wells injecting hazardous waste require permits under Subtitle C of RCRA and therefore must comply with these requirements.

Under Section 206 of the RCRA Amendments, Section 3004(u) of the Hazardous and Solid Waste Amendments of 1984 (HSWA), all RCRA permits issued after November 8, 1984, must require owners/operators of hazardous waste treatment, storage and disposal facilities to take corrective action for all releases of hazardous waste or hazardous constituents from any solid waste management unit (SWMU), regardless of the time at which waste was placed in the SWMU. A UIC permit which addresses corrective action for all SWMUs at a facility constitutes a RCRA permit-by-rule. Both hazardous and nonhazardous waste can meet the definition of solid waste under 40 CFR §261.2.

## INVESTIGATION OF PRIOR RELEASES

As part of the review of the application for a UIC permit, an investigation into the possibility of any prior release from the permitted well and the injection zone was undertaken. Based on this review, there is evidence of a prior unpermitted release. This release occurred in 1973 into the Eminence, Potosi, and upper Franconia formations. The release was the result of a parting in the tubing and corresponding breach in the protective casing. As a result of the well failure and a re-evaluation of the geology and hydrology of the local area Allied was permitted to recomplete their well and utilize the zones where the prior release had occurred as new injection zone. No corrective action is necessary for this prior release since the release occurred into the present permitted injection zone. Should the USEPA determine that additional releases of hazardous waste or hazardous constituents is taking, or has taken place, corrective action requirements and a schedule for their completion will be imposed under a modification to this permit rider.

This UIC permit rider addresses RCRA corrective action requirements for the permitted well and the injection zone only and, therefore, does not constitute a complete RCRA permit-by-rule. However, the well will maintain interim status under RCRA, provided it has and continues to comply with interim status requirements. This permit rider does not release the permittee from complying with corrective action requirements for other SWMUs at the same facility, nor any other RCRA and HSWA regulations applicable to units and operations at this facility.

Signed this                      day of                      , 1986.

**DRAFT**

---

Valdas V. Adamkus  
Regional Administrator

State UIC Permit Number UIC-003-W1-AC

Operator Name Allied Chemical Corporation

Well Name WDW #1

EPA Identification ILD005463344

Reviewer's Name Steve Gobelman

Date of Site Visit July 3, 1986

CLASS I RIDER PERMIT TECHNICAL REVIEW SHEET  
FOR CORRECTIVE ACTION DETERMINATIONS

DIRECTIONS: If a technical parameter is NOT APPLICABLE for this review please indicate by entering 'NA' on the corresponding line.

I. STATUS OF WELL:

Hazardous/ Date Injection Commenced? March 16, 1973 .

II. INVESTIGATION OF PRIOR RELEASES: (Class I Hazardous Waste Wells Only.)

CONSTRUCTION RECORDS: All Materials adequate to prevent corrosion or pressure failure? (Y/N) yes . If No, Comment: \_\_\_\_\_

	<u>ORIGINAL MATERIAL</u>	<u>MATERIAL AFTER REWORK</u>
CASING:	<u>see Attachment A</u>	_____
CEMENT:	<u>see Attachment A</u>	_____
TUBING:	<u>3 1/2" fibercast 0-5252</u>	<u>2 7/8" OD Fibercast 0-3545'</u> <u>2 3/8" OD Fibercast 3545'-3660</u>
PACKER:	<u>NA</u>	<u>NA</u>
ANNULUS FLUID:	<u>Kerosene</u>	<u>Kerosene</u>

REWORK RECORDS:

<u>DATE</u>	<u>TYPE OF REWORK</u>	<u>EFFECT ON CASING OR CEMENT</u>
<u>10/19/73</u>	<u>Well failure</u>	<u>Milled out casing for new injection zone, Placed acid resistant cement</u>
<u>10/1981</u>	<u>Replaced tubing and anodes</u>	<u>None</u>
<u>4/86</u>	<u>Lowered new set of anodes</u>	<u>None</u>

MECHANICAL INTEGRITY TESTS: Include initial casing pressure test.

<u>DATE</u>	<u>TYPE OF TEST</u>	<u>TEST RESULT</u>
<u>See Attachment B</u>	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Annulus Pressure Records provided? (Y/N) yes

If yes, give dates covered: Since May 1973

Any indication of well failure? (Y/N) Yes\*Anode detected a problem in July 1973

If yes, describe: Tubing parted, well shut in and rework completed 10/19/73. Injection went into the Eminence, Potosi and Upper Franconia Formations. These formations are above the Mt. Simon Sandstone which was used previously as the injection zone.

Injection Pressure and Flow Rate Records provided? (Y/N) yes

If yes, give dates covered: Since May 1973

Any indication of well problems? (Y/N) no

If yes, describe:

Have Continuous Monitoring Records been kept for:

Annulus Pressure? (Y/N) yes      Dates kept? Since Jan 1974.

Injection Pressure? (Y/N) yes      Dates kept? Since Jan 1974.

Flow Rate? (Y/N) yes                      Dates kept? Since 1977.

INJECTION PRESSURE: Maximum recorded? 384                      psig.

Is the maximum recorded injection pressure greater than the injection formation fracture pressure? (Y/N) no

FLUID COMPATIBILITY:

Is there any evidence of a blow-out due to injection of hot acid?  
(Y/N) no.

If yes, describe: \_\_\_\_\_  
\_\_\_\_\_.

Document the static fluid of the injection zone: \_\_\_\_\_

Potentiometric surface 483 feet, msl.

DESCRIBE ANY OTHER INFORMATION ON RELEASES IN THE FILE? \_\_\_\_\_

Rework records from July to October 1973.

NAME OF INDIVIDUAL CONTACTED AT THE STATE AGENCY which is responsible for

Class I wells: Steve Gobelman Date of contact: 7/24/86

Any evidence in the state files on prior releases? (Y/N) yes.

If yes, describe: Oct. 1973, tubing parted and injection went into  
the Eminence, Potosi, and Upper Franconia Formations. Presently  
these upper units where the release occurred are used as the injection  
zone. The previous release does not pose a threat to USDWs or  
compromise the present injection operation.

ATTACHMENT A

Casing original material:

13 3/8" OD	Surface casing	0-224'
9 5/8" OD	Casing	0-2773'
7 " OD	K-55 casing	0-4970'
7 " OD	fibercast	4970-5144'

Casing Material after rework:

13 3/8" OD	Surface casing	0-224'
9 5/8" OD	Casing	0-2773'
7 " OD	K-55 casing	0-3600'
5 1/2" OD	K-55 casing	0-3351'
4 1/2" OD	fibercast	3551-3613'

Cement material after rework:

Regular Cement	0-224'
Pozmix	0-2773'
Pozmix-resin cement	1870-3600'
Epseal cement	0-3613'

ATTACHMENT B  
DANVILLE WORKS  
DEEPWELL  
MECHANICAL INTEGRITY TESTS

<u>DATE</u>	<u>TYPE</u>	<u>RESULTS</u>
05/22/74	Radioactive tracer survey	Disposal interval 3634' to 3642'
11/13/74	Radioactive tracer survey	Disposal interval 3630' to 3642'
05/28/75	Radioactive tracer survey	Disposal interval 3630' to 3650'
	Caliper log of injection tubing	Tubing intact
11/13/75	Radioactive tracer survey	Disposal interval 3632' to 3642'
	Caliper log of injection tubing	Tubing intact
8/4-5/76	Surface pressure test of injection tubing Caliper log of casing PAL log of casing Replaced selected joints of injection tubing	One joint very slight leak Casing intact Some internal external corrosion judged non-serious
12/7-10/76	Radioactive tracer survey of casing	No casing leaks Disposal interval 3612' to 3635'
	Replaced selected joints of injection tubing. In- place pressure test of tubing	No leaks
06/14/77	Radioactive tracer survey	Disposal interval 3614' to 3648'
	In place pressure test	No leaks
1/24/78	Radioactive tracer survey	Disposal interval 3628' to 3636'
	In place pressure test	No leaks

# ATTACHMENT B (Con't)

<u>DATE</u>	<u>TYPE</u>	<u>RESULTS</u>
03/29/78	Caliper log of injection tubing	Tubing intact
06/20/78	Radioactive tracer survey	Disposal interval 3630' to 3650'
	In place pressure test	No leaks
12/12/78	Radioactive tracer survey	Disposal interval 3622' to 3632'
	In place pressure test	No leaks
3/29/31/79	Surface pressure test of tubing	No leaks
	Caliper log of casing	No evidence of corrosion
	Caliper log of injection tubing	Tubing intact
	Radioactive tracer survey	Disposal interval 3624' to 3638'
10/17/79	Radioactive tracer survey	Disposal zone below 3625'
	In place pressure test	No leaks
04/15/80	Radioactive tracer survey	Disposal interval 3652' - 3662'
	Caliper log of injection tubing	Tubing intact
	In place pressure test	No leaks
10/22/80	Radioactive tracer survey	Disposal interval 3614' to 3662'
	In place pressure test	No leaks
08/31/81	Radioactive tracer survey	Disposal interval 3644' to 3668'
	In place pressure test	No leaks



ATTACHMENTG B (Con't)

<u>DATE</u>	<u>TYPE</u>	<u>RESULTS</u>
10/20-22/81	Caliper log of casing Replace injection tubing,  In place pressure test  Caliper log of new tubing  Radioactive tracer survey	Excellent condition  No leaks  Tubing in place  Disposal interval 3630' to 3666'
04/21/83	Radioactive tracer survey  In place pressure test  Visual surface inspection of injection tubing	Disposal interval 3672' to 3674'  No leaks  Excellent condition
08/15/85	Casing pressure test  Surface pressure test of injection tubing  Temperature log	No leaks  No leaks  Passed
04/29/86	Radioactive tracer survey  Surface visual inspection of tubing	Disposal interval 3642' to 3656'  Replaced 12 joints

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V

DATE: \_\_\_\_\_  
SUBJECT: Draft Underground Injection Control (UIC) Continuing Releases/ Corrective  
Action Permit Rider for the Allied Chemical Corp. Facility in Illinois  
FROM: Charles H. Sutfin  
Director, Water Division  
TO: Valdas V. Adamkus  
Regional Administrator

We are by this memorandum transmitting for your review, the attached draft Underground Injection Control (UIC) Continuing Releases/Corrective Action Permit Rider for the well at the Allied Chemical Corporation Facility in Danville, Illinois.

Allied Chemical Corporation (ACC) has been operating a Class I hazardous waste disposal well at their plant site in Danville, Illinois since 1973. After an initial well completion into the Mt. Simon Sandstone, the ACC well was recompleted in 1974, at which time the shallower Eminence-Potosi Dolomite became the injection interval. The present injection waste stream consists primarily of hydrochloric and hydrofluoric acids, chloride salts, and arsenic and nickel (as a result of processing and use as catalyst). The well is a fluid-seal well, without a packer. However, a new electrode system has been installed to accurately measure any fluid loss and it's effectiveness has been demonstrated to our satisfaction and that of the Illinois EPA.

A detailed investigation into the possibility of prior releases of hazardous waste or hazardous constituents from the injection well and injection zone was conducted by UIC staff. This well was also inspected by UIC Section staff during a February, 1986 visit to the site. Based on this review, there is no evidence of any prior release. The attached Class I Permit Rider Technical Review Sheet summarizes the investigation and findings for this well.

If you agree with our proposal to issue the draft Continuing Releases/ Corrective Action Permit Rider for this well, please concur below.

Feel free to contact me at 3-2147, if you have any questions.

I (do/do not) concur.

**DRAFT**

Valdas V. Adamkus  
Regional Administrator

\_\_\_\_\_  
Date

Attachment

cc: Constantelos  
Attermeyer

28



Allied Corporation  
P.O. Box 13  
Danville, IL 61832  
Telephone (217) 446-4700

September 12, 1986

Illinois Environmental Protection Agency  
Government & Community Affairs Section, Director's Office  
ATTN: Public Notice Clerk  
2200 Churchill Road  
Springfield, Illinois 62706

SUBJECT: COMMENT ON DRAFT PERMIT #UIC-003-W1-AC

Dear Sir:

We are in receipt of the above referenced Draft Permit and associated Fact Sheet and Notice of public comment period. This permit is essential for the continued operation of this plant and we appreciate this opportunity to provide our comments.

The attached comments address a fairly large number of concerns. In many of our comments we suggest minor modifications to the draft permit to achieve considerably greater practicability in achieving the objectives of the UIC program relative to our well. Because of the large number of items, we think it is essential to meet with you to ensure clear communication and a full understanding of these issues.

In addition, some of our concerns pertain to draft permit limitations which cannot currently be met and which are unnecessarily restrictive. Accordingly, we cannot accept this permit until a resolution of these issues is reached. These major concerns include but are not limited to the following:

1. Injection Temperature Limit of 50 to 80°F

We cannot currently meet this limit and we believe that there is no need to do so. Our own studies and those of MIT Professor Dr. Robert Reid show that more than adequate CO<sub>2</sub> control can be achieved by limiting the strength of injected acid. The<sup>2</sup> past 13 years of our well operation witness to this fact. In the final analysis costly temperature controls would not make sense since injected wastes will ultimately be reheated in the 106°F injection zone. Accordingly, we are requesting that these limits be revised to reflect current normal injection temperatures, i.e. 33 to 130°F.

2. HCl Limit of Maximum 4% by Volume

Dr. Reid's study conservatively demonstrates that HCl concentrations up to 6 percent by weight may be safely injected over continuous and extended periods of time into carbonate formations. Again, this has certainly been verified by years of trouble-free injection at both our

RECEIVED

SEP 15 1986

IEPA-DLPC

29

PERMIT #UIC-003-W1-AC

facility and others in Illinois. The 4% limit would be unnecessarily restrictive and we request it be changed to 6 percent, a number for which there is conservative technical support.

In addition, this limit should be expressed as an average limit. All of the existing data are average concentrations. Thus, past correlation between safe operation and concentrations handled is on an average basis. We have no basis to conclude that we can comply with such a limit expressed as a "maximum" and past operation and theory indicate it is unnecessary to do so.

### 3. Annual Mechanical Integrity Testing

Requiring MITs on an annual basis is overly burdensome, provides very little, if any, additional assurance of well integrity over that of our continuous monitoring systems, results in totally unnecessary wear of the well components through dismantlement and reassembly of the well and is simply not cost effective. Per 35 I.A.C. 730.108 the subject well has mechanical integrity if there is no significant leak in the well tubing or casing and there is no fluid movement into an USDW through vertical channels adjacent to the well bore. Any significant tubing or casing leaks in the well would be immediately detected via redundant monitoring and alarm devices. Both the annulus pressure recording system and the specially designed electrode monitoring system will immediately detect such failures. This fact has been proven on many occasions by simulating a tubing/casing failure by actually backflowing the annular kerosene to a surface storage tank. This "back flow" test, which will be conducted on a quarterly basis, along with the redundant well monitoring systems allow for more than adequate proof of mechanical integrity of tubing/casing components. Testing for channeling along the well bore is accomplished via temperature or noise logs. The USEPA suggested frequency for such testing is generally once every five years. Accordingly, we believe a MIT schedule of not more than once every two years is more than adequate to demonstrate mechanical integrity and this frequency should be specified in the permit.

*Guidance  
recommended  
annually for  
oil/water waste*

In highlighting the above concerns we do not wish to detract from the attached comments which address items of equal importance to providing an environmentally and technically sound permit. We believe the permit with our suggested minor modifications will still have a considerable safety factor over that provided in previous permits, and over that necessary based on UIC regulations and past demonstrated well performance.

RECEIVED

SEP 16 1986

IEPA-DLPC

DRAFT PERMIT #UIC-003-W1-AC

COMMENTS BY ALLIED CORPORATION

SEPTEMBER 12, 1986

FACT SHEET

1. Reference is given in the fact sheet and throughout the draft permit to Allied Chemical Corporation as the owner of the injection well. It should read Allied Corporation to reflect a previous change.
2. The General Description indicates the waste water is stored in rubber lined fiberglass tanks. Actually this waste water is stored in rubber lined steel tanks as well as a fiberglass tank.
3. An injection limit of 70,000 gallons/day was imposed. This amount was submitted in the permit application as an average value only. Based on the draft permit flow rate limit of 150 gallons/minute, we request a daily injection limit of 216,000 gallons.
4. A concentration of 25,000 mg/l inorganic salts (other than HCl) is representative of the average concentration and should not be specified as a maximum limit. Accordingly we request an upper limit of 250,000 mg/l. Comments on the other parameters are addressed later in this correspondence.
5. An expiration date for the permit is not provided. It is requested the permit expiration be set at 10 years from the date of permit issuance.

*Regional  
5 years for  
10 years for other*

DRAFT PERMIT

6. Page 1 - Paragraph 3b should be changed to state the annulus of the 7" and 9 5/8" casing is cemented to a depth of 1870' below the Kelly bushing as is indicated in Attachment C of the draft permit.
7. Page 2 - Paragraph 4 should be reworded to allow for minor changes in tubing lengths with each workover. Also, the exact depths of these minor tubing length changes cannot be known until actual installation and therefore a 30 day notice of these minor changes prior to actual workover cannot be made to the Agency. Accordingly we request these tubing lengths be qualified by adding +25' to the indicated lengths.
8. Item B.1.c., which lists the waste parameters generally more closely resembles the typical or average concentrations given in the permit application and not the maximum limits. Also, the 4% HCl and 80°F temperature limit cannot be met and are unnecessarily restrictive for reasons presented in earlier correspondence. Please refer to our response to question #32 of Attachment I in which we provided additional information for the UIC Permit Application per IEPA request. Accordingly we hereby request the following limits:

RECEIVED

SEP 15 1986

IEPA-DLPC

25 h. This condition should be revised to state the permittee shall cease injection if a loss of mechanical integrity becomes evident unless specific approval for continued operation is granted by the Agency. This revision will allow for temporary continued use of the well in events, if any, of marginal, questionable or delayed M.I.T. results.

25. Item 26 i. Regarding gauge calibration, we contacted Mr. James Houch of the National Bureau of Standards (NBS) and asked how to calibrate the gauges "according to the procedures" of NBS. Mr. Houch indicated this would be highly impractical since it would mean only NBS could perform the actual calibrations. Because of this he suggested the gauges be calibrated using procedures which are "traceable" to N.B.S. Accordingly, we request this condition be revised to allow for the use of gauge calibration procedures which are traceable to National Bureau of Standards.
26. Item 26j. The MIT schedule is addressed earlier in the permit draft and although we recognize there may be instances where additional testing may be prudent, we do not believe it is reasonable to require a demonstration of mechanical integrity of the well "at any time" without proper justification. Therefore we request this paragraph be deleted.
27. Attachment B Item 6 Filling the annulus with water and allowing it to "stabilize overnight" is not only impossible since the water level will automatically drop to the standing water level of the well, but it also offers no benefit to conducting the mechanical integrity test. Also, providing for this stabilization time unnecessarily delays test completion, therefore at times unnecessarily increases testing costs and may adversely impact plant operations by requiring the shutdown of the plant process itself. Accordingly we request this requirement be deleted.
28. Item 7. It is requested the annulus test pressure be changed to 300 psig. A 300 psig pressure test, which is 25% greater than actual operating pressure is more than adequate to demonstrate mechanical integrity.
29. Item 17. It is requested this condition be changed to require corrective action to be taken if a maximum of 10% annulus pressure drop is exceeded during the annulus pressure test. It is our experience that pressure will be lost rapidly even if small leaks occur when testing with an essentially non-compressible fluid and small pressure changes can be caused by temperature changes and other factors.
30. Item 18. To provide for a more accurate determination of fluid loss, if any, during the annulus pressure test, it is requested that an actual measurement of fluid loss be permitted by repressurizing the annulus and bleeding off the fluid into a graduated cylinder until the appropriate pressure is reached.
31. Attachment D. There is no reason to believe phenol is to be present in the injected waste water. Accordingly we request the requirement of analyzing for phenol be deleted from the permit.

RECEIVED  
SEP 15 1986

IEPA-DLPC

Vincent Koers  
603 W. Woodlawn  
Danville, IL 61832

10/13/86

Illinois Environmental Protection Agency  
Government & Community Affairs Section,  
Director's Office  
2200 Churchill Road  
Springfield, IL 62706  
Att: Public Notice Clerk

Re: Underground Injection Control Permit for Allied Chemical  
IEPA #1838040027  
USEPA #ILDO05463344  
Permit #UIC-003-W1-AC

The attached presentation is supplemental to our presentation of September 14, 1986, and includes new and revised information that should be included in an agenda for a public hearing relating to the Allied permit request. Additional points to be addressed at the hearing that are NOT in the attached presentation include:

- \* Allied area geological strata represent an underground basin located in the same strata in which other UIC waste wells deposit, but significantly lower than those other wells.
- \* Allied has failed to address current surface contamination problems related to inadequate pre-treatment, fume collection, and surface containment of process chemicals and waste.

New points to be addressed that ARE in the attached presentation include:

- \* Laws not being met by IEPA process, Page 20.
- \* Sub-surface trespass being allowed by IEPA, Page 20.
- \* Local disaster planning not coordinated with closure plan, Page 21.

Changes of note to the original 12 page presentation, now 23 pages, are included on the next page for your information.

Sincerely yours

*Vincent Koers*

Vincent Koers

RECEIVED  
OCT 16 1986  
EPA CLERK

beginning of pumping waste into the Potosi strata in November estimated 344 million gallons of hazardous material has been from 12/73 through 8/86. According to Allied's own records, are exceeding the permitted 70,000 gallons per day. They averaged at least 76,000 gallons per day, assuming a seven day operation, around the clock and around the year, for the last 13 years, despite repeated company certifications that the typical flow is 65,000 per day. No record was found that IEPA has ever made an issue of this violation of the permit. All flow figures are based on Allied's totalizer readings, and there appears to be no independent verification of its accuracy.

#### Laws not being met by the current IEPA process

Both state and federal laws allow the injection of hazardous waste, with the stipulation that potable water cannot be allowed to be contaminated. It has become the responsibility of the IEPA to administer the law, and to develop programs, practices and procedures, along with special conditions, to carry out the intent of the laws.

IEPA is failing to do this, in not having positive programs associated with the deep well approval process which are designed to reasonably demonstrate direct contamination when and if it occurs. The attitude of some IEPA employees, to the effect that the IEPA is going to permit wells in this manner, and that it is up to someone else to show that a specific well is contaminating the ground water, is wrong! This viewpoint distorts the role of the IEPA into being bed fellows of the industries that they are chartered to control. The IEPA must reexamine its position and insure a balanced program that allows wells that can be demonstrated to meet the law, and closes down those that only claim on paper to meet the law. The economics of a deep well operation leave ample money for industry to meet additional special conditions in order to demonstrate that their wells are safe, and continue to be safe, as required by law.

#### Subsurface Trespass being allowed

Land owners' rights controlling the ground beneath their property, and the rights of all inhabitants for any legal "commons" that may exist both have legal position, and offer legal redress against subsurface trespass upon their property rights. This is another issue that needs to be addressed by the IEPA. It seems obvious that it is to Allied's advantage to keep the published waste front radius as small as possible, in order to minimize the potential for trespass claims at some future point.

Our area is quite familiar with how the coal mine owners of another day distorted the maps showing the mine shaft locations to make it appear that the shafts were well clear of our towns, when in fact the shafts followed the coal wherever it went, and undermined our communities in the process. What assurances do we have that these "data" showing the waste front have any basis in fact? Is Allied's "need" to minimize the front radius more compelling than the "needs" of its neighbors and the community?



#### Disaster planning

Million County Emergency Services Disaster Agency (EDSA) is required by federal and state law with the initial reaction responsibility to act as the clearing house for all reportable events, and it initiates whatever further reaction(s) may be required by the event. Their disaster plans for the well include the sealing of the surface of the well in order to contain any waste and other products that may be spewing forth from the well in the event of some future disaster. While this would contain the hazardous waste, and prevent surface contamination, it can cause or intensify contamination of the ground water by the hazardous waste.

Maintaining the integrity of the well casing is the only means to preventing contamination of the ground water by the hazardous waste. In an explosion, or rapid gas build up, as with the carbon dioxide explosion at Tuscola, where the well casing was physically blown from the ground, the well casing integrity was of course lost and ground water contamination would have had to occur. Sealing of the surface would hasten and intensify the degree of contamination, if there were any pressure behind the waste. This pressure would force the waste through any voids in the casing and into the surrounding strata. (Thus, disaster planning can insure that contamination does occur, rather than minimizing it, in the event of a significant disastrous occurrence)

The Allied well has failed at least twice, under circumstances that could have led to either sub-surface or surface contamination. In 1973, the entire lower well casing separated below 4000', destroying the lower 2600' of the well and causing an undetermined amount of contamination to the ground water. (Later, in 1983, a blow out occurred, caused by an undetermined source of carbon dioxide rupturing some equipment, and finding its way to the surface, where CO<sub>2</sub> spewed for some 12 hours) There is no reason to believe that hazardous waste was not carried up to the surface by the gas, and the excess pressure may well have caused underground contamination. It is unclear whether this was treated as a disaster, or passed off as a manageable event at the time it occurred.

Tim Bahr.  
FYI

Greg Michaud  
Illinois EPA  
Office of Government & Community Affairs  
2200 Churchill Road  
Springfield, Illinois 62706

Re: Allied Chemical Corp. (Permit application)

September 10, 1986

Dear Mr. Michaud:

In regards to the recent application for a permit to authorize the operation of an underground injection well at Danville, Illinois. NO! NO! NO! NO! NO! NO! NO!

Absolutely not!

We have lived near Allied Chemical for 30 years and have put up with there sloppy operation above ground and we shudder to think what it would be like below ground.

Allied Chemical has never been a good neighbor and we have our doubts if they ever will be.

Sincerely,

*Jacob H. & Patricia Lape*  
Jacob H. & Patricia Lape  
R. R. #5, Box 150  
Danville, Illinois 61832

cc

RECEIVED

SEP 16 1986

IEPA-DLPC

Stave - Pls  
Suspend 3  
20 Greg Michaud

Danville, Illinois  
September 3, 1986

Illinois EPA  
Office of Government & Community Affairs  
Attention: Public Notice Clerk  
2200 Churchill Road  
Springfield, IL 62706

Attention: Greg Michaud

Dear Mr. Michaud:

We have observed the "Public Notice" in our local newspaper, The Commercial-News, that Allied Chemical is requesting your permission to sink an additional well for the disposal of their chemical waste.

We would like to voice our objections to any additional disposal of this type in our area. We are aware of the original well and have had misgivings about it since it's construction. No one needs another Highland Park, and we are afraid that Highland Park will be nothing compared to what may happen when Allied's well casings disintegrate and that toxic material is released into the soil.

Allied's recent public relations campaign leaves us wondering what is being planned. The newspaper advertisements relating they wish to be good neighbors, testimonials of their employees, a planned open house for nearby residents, etc. It appears we are being prepared for something controversial, and we suspect it is their planned new well.

Our home was built before the construction of the Allied Plant. We have lived for 33 years with the air pollution from the plant. Damaged vegetation, pitted aluminum, rusted metal (even indoors), etched window glass, etc. At times there is an almost constant "pop-off" of releasing steam (?), and their in-plant communication system is so loud that the entire neighborhood could relay their phone calls! Upon complaint to the Plant about the PA system, they have now restricted activity during the night.

Several friends living in our area are willing to hire an attorney to investigate this for us, but feel we should express our dismay, frustrations, and disapproval of the proposed new construction to you before proceeding with any legal action.

Sincerely,

*Mr. and Mrs. Robert T. Walter*

Mr. and Mrs. Robert T. Walter  
R.R.#5 Brewer Road  
Danville, Illinois 61832

cc: Rep. William B. Black  
2715 1/2 N. Vermilion St.  
Danville, IL 61832

Vincent A Koers  
603 West Woodlawn  
Danville, Il 61832

9/14/86

Illinois Environmental Protection Agency  
Government & Community Affairs Section,  
Director's Office  
2200 Churchill Road  
Springfield, Il 62706  
Attention: Public Notice Clerk

RE: Underground Injection Control Permit for Allied Chemical  
IEPA #1838040027  
USEPA #ILD005463344  
Permit #UIC-003-W1-AC

The attached document is submitted both as comment on the currently pending permit application, and to request that a public hearing be held to further address the issues brought out herein. This document has been prepared to meet the comment period expiring 9/16/86.

The document consists of 12 pages including this cover sheet, and includes an index, general history, comment, and summary of actions requested.

It is my hope that these concerns can be addressed by competent authorities within your department, or the state and federal resources available to you, and resolved in such a way that reasonable waste disposal may continue by Allied under a more stringent control system.

Our industries must be able to dispose of waste incidental to their operations; but at the same time, unnecessary waste should not be created because the disposal method is so cheap, and the surrounding environment should not be at risk because of the disposal methods and control systems utilized.

  
Vincent A Koers

cc: IEPA:Greg R. Michaud

RECEIVED

SEP 16 1986

IEPA-DLPG

### General History

Allied's history as a hazardous waste producer predates 1955, at which time sporadic complaints were received by predecessors of the Illinois Environmental Protection Agency (IEPA) about localized stream pollution emanating from the Allied facility at Danville. Several times a year, on and off, various inspections were made in response to complaints about "milky waters" in the streams, bird kills, and other outward signs of pollution, and were typically followed up by action-reaction cycles back and forth between the state authorities and Allied, and generally resulted in Allied's making improvements of one kind or another. Some payments were made to area farmers for alleged crop damage by chemical spills. This pattern continued through the 60's and into the early 70's, until damage was discovered to some county highway drainage structures. State involvement stepped up, and a lawsuit was filed (EPA vs Allied), in which Allied was found guilty of several counts of pollution and fined.

The lawsuit appears to have been the impetus to Allied to change the way wastes were handled, and they began in 1971 to explore the feasibility of installing a deep injection waste well, and started construction of the well in 1972. At the time the lawsuit was settled in early 1973, the well was under construction; IEPA was in agreement that the well appeared to be a solution to Allied's pollution-related problems, and the Court made completion of the well a part of the Court Order.

At that time, apparently, no Danville zoning was in force that would have required the approval of the well by the Danville City Planning Commission, or other official body, although the IEPA's 2.5 mile zone of endangerment protrudes well into the city's boundaries, and even further into the current zoning law's area of influence.

The well went into operation on May 4, 1973, pumping hazardous waste into the Mt. Simon sandstone strata 6684' deep. From May to September 1973, some 2.9 million gallons were placed in the upper 1820' of the Mt. Simon sandstone strata, when the well casing parted and the well was shut down mid-month. Repair efforts were unsuccessful, and the well was sealed with a concrete cap at the 4025' level and converted to a well depositing into what has proved to be the Potosi mixed dolomite and sandstone strata. The well is open from 3613' to 4025', but testing indicates that absorption can take place in only 142' of this area, and radioactive tracer testing indicated that waste is actually going into a 12' strata at the 3732' level.

RECEIVED  
SEP 16 1986  
EPA-DLPC

4/11/38  
Note this was a rough preliminary draft  
presented by Allied Chemical for discussion  
purposes at Conference on 3/22/72  
at Champaign. This has been reviewed  
superintendent April 11, 1972 DRAFT  
Robert A. Weiss, Mgr.  
3/22/72  
Champaign

Mr. W. Akers  
Chief, Permit Section  
Illinois Environmental Protection Agency  
2200 Churchhill Road  
Springfield, Illinois 62706

See Proposed  
Well Design

Dear Sir:

Attached is our application for a permit to drill and  
test a well for industrial waste injection at our Danville  
Works. We would appreciate your favorable consideration of  
our application. If there are any questions that may arise,  
please do not hesitate to call me.

Very truly yours,

J. A. Gouck

1972



#### IV. Proposed Well Design, Construction and Testing Procedure

(to be prepared by Lohman & Johnson)

#### V. Proposed Surface Equipment

Until the proposed well has been drilled and the data relating to injection pressures, permeability and porosity obtained, we will not be able to finalize the design for the surface equipment. The final design will take into consideration good engineering practices and allow for efficient operations. All pumps, filters and flow lines will be of suitable corrosion resistant materials. A 400,000 gallon rubber-lined storage tank will be installed to provide surge capacity of up to seven days at the minimum flow condition (40 gpm). In addition we would propose installing suitable instrumentation to continuously monitor the injection flow and pressure, casing pressure and down hole conductivity.

#### VI. Raw Waste Characteristics

The waste is primarily crude muriatic acid, a by-product in the manufacture of Genetron<sup>R</sup> fluorocarbons. In addition, it will be necessary to periodically dispose of off-grade or excess purified muriatic acid. The flow of the waste stream will vary between a low 40 gpm and a maximum of 150 gpm, with an average of 70 gpm. The characteristics of the waste are:

Flow	40-150 gpm
pH	0.4-4.0
Hydrochloric Acid	up to 31.5%
Hydrofluoric Acid	less than 1%
Inorganic Chlorides (other than HCl)	5,000-25,000 ppm
Inorganic Fluorides (other than HF)	100 ppm
✓ <i>CALIF</i> Organics	None
✓ Free Chlorine	None
Suspended Solids	less than 100 ppm
Discharge Temperature	Ambient
<i>Sy. Cu. -</i>	1.0 - 1.13

Tests to check the compatibility of the waste stream with

Mt. Simon water were conducted in 1969. Initial test used a synthetic sample of Mt. Simon connate water of the following composition.

FeSO<sub>4</sub> - 36.1 mg/liter

MnCl<sub>2</sub> - 25.2 mg/liter

NaCl - 76635 mg/liter

MgCO<sub>3</sub> - 242.6 mg/liter

CaSO<sub>4</sub> - 240 mg/liter

No precipitation or chemical reaction was observed at dilution 10%, 30%, 50%, 70%, and 90%. The above tests were then confirmed by using Mt. Simon water for an Allied Chemical deepwell that was being drilled in Detroit, Michigan.



VII. Proposed Preinjection Waste Treatment Program

Except for filtration to remove solids, we would propose no other preinjection treatment. The filtration equipment design will be determined based on the core sample analysis.

VIII. Proposed Operating Program

We propose injecting wastes into the well at a flow rate varying between 40 and 150 gpm over the life of the well. Average flow rate will be 70 gpm during initial years of the well. In the later years this will increase to 120 gpm. The injection pressure is expected to be in the range of a slight vacuum to 100 psig. The proposed monitoring instruments have already been indicated in Section V of this application.

IX. Proposed Contingency Plan in Event of Unanticipated Well Failure During Operation

A storage tank with 400,000 gallon capacity will give adequate surge capacity (seven days at low rates) for all normal well repairs. In addition there are tanks on site which can be put in service on a temporary basis. As a last resort we would shut down the plant and import material from other locations.

FEASIBILITY STUDY  
PROPOSED DEEP-WELL WASTE DISPOSAL SYSTEM  
NEAR DANVILLE, ILLINOIS  
FOR ALLIED CHEMICAL CORPORATION

INTRODUCTION

This report presents the results of our studies to evaluate the feasibility of installing a deep-well injection system to accept discharge from the Allied Chemical Corporation plant near Danville, Illinois.

A review was made of pertinent published reports and maps. This was followed by a visit to the Illinois Geological Survey at Urbana, Illinois where Survey geologists were contacted to obtain specific data regarding the Danville area. Various unpublished maps and reports were examined and well logs and other data were examined in detail. Data concerning existing injection wells in the area, including those in Douglas County, Clark County and Vermillion County, Indiana were also studied. A list of the persons contacted and the literature consulted is presented at the end of this report.

We understand that the waste effluent will contain muriatic acid and hydrofluoric acid (pH ranging from 0 to 4), chloride not exceeding 5,000 ppm, and less than 100 ppm suspended solids. The injection rate will be approximately 40 gallons per minute (GPM).

GEOLOGIC ENVIRONMENT

Vermillion County, in which the Danville area is situated, occurs in a region of gently rolling glacial drift laid down by the last Pleistocene glaciation. Surface elevations decrease from approximately 650 feet above sea level in the northwest to about 500 feet in the southeast. The region is drained to the southeast by the Vermillion River and its tributaries, and this river, in turn, is tributary to the southward-flowing Wabash River. At Danville, the Vermillion River is incised in the unconsolidated Pleistocene sediments to a depth of 50 feet or more. The surface deposits bear no relation to the bedrock topography which is everywhere concealed.

The Danville area is underlain by a thick sequence of Paleozoic sedimentary rocks ranging in age from Cambrian to Pennsylvanian. The strata are composed of alternating beds of sandstone, shale, dolomite, and limestone. The underlying Precambrian crystalline basement rocks lie at depths in excess of 6,000 feet beneath the surface.

### Structure

The area is located within the northeastern portion of the Illinois Basin which is an oval-shaped structural depression with an area of about 135,000 square miles. From Danville, the Basin extends east and south into parts of Indiana, Kentucky and Missouri. In a structural sense, the area under investigation occupies a restricted sub-basin because it is bounded on the west by the LaSalle anticline. This anticline was a zone of relative uplift which probably dates back to the Late or Middle Ordovician time. It has been observed that the younger rocks (Devonian to Pennsylvanian) thin on the anticlinal belt indicating relative upward movement of the structure during that time. The consequence of these events is that the rocks underlying the Danville area are located on a homocline within a sub-basin, but the deeper strata have a regional dip towards the south and presumably thicken in the same direction. Structural details are lacking mainly because of a paucity of deep wells in the area. The regional inference is clear although formational attitudes and thicknesses may diverge locally from the regional pattern.

The nearest known fault is the Sandwich Fault located more than 75 miles from the site. Faulting in the Danville area has not been recognized.

### Stratigraphic Sequence

A rather thin mantle of glacial drift is underlain by the Conemaugh Series of Pennsylvanian Age. The Pennsylvanian strata consist of sandstone and shale with minor amounts of coal and limestone. They are underlain by the Mississippian, including the Chesterian clastics and the Valmeyeran limestones. The New Albany shale of Mississippian-Devonian Age is found beneath the Mississippian limestones.

The base of the New Albany shale is about 300 feet below sea level at Danville. It is underlain by limestone and dolomite of the Hunton Megagroup of Devonian-Silurian Age. The Maquoketa Group, composed mostly of shale, underlies the Hunton Megagroup. The Maquoketa Group is underlain by dolomite containing minor limestone, shale and sandstone of the Galena-Platteville Groups and the Glenwood formation. The St. Peter sandstone underlies the Glenwood formation.

The Prairie du Chien Group underlies the St. Peter and consists of impermeable dolomite with occasional layers of sandstone and shale. The Prairie du Chien is underlain by the Cambrian Eminence-Potosi formations, which locally may exhibit crevices caused by solutioning.

The Franconia, Ironton and Galesville formations underlie the Potosi formation, and are composed of fine to medium grained sandstone with silty and shaly layers. The Eau Claire formation, which is nearly 1,000 feet in thickness, underlies the Galesville. It is predominately shale, but includes some sandstone and dolomite. It overlies the basal Cambrian Mt. Simon sandstone which is on the order of 2,000 feet in thickness. It consists of a fine to coarse grained sandstone with minor amounts of shale.

Other than coal measures in the Pennsylvanian strata and sand and gravel deposits in the glacial drift, the area is without commercial deposits of mineral resources. Deeper strata contain quartz sand and limestone, but their depth precludes their utilization in this area.

#### Hydrologic Conditions

Potable ground water occurs in the glacial drift and the upper part of the Pennsylvanian strata. Water wells in the area generally have low yields as a result of the relatively impermeable nature of the glacial deposits and Pennsylvanian bedrock. Depths of water wells in the area rarely exceed 300 feet.

The lower Pennsylvanian and deeper strata contain non-potable water. Water in these deeper strata have salinities far in excess of maximum standards set by the U.S. Public Health Service (1946) of 1,000 ppm total dissolved solids of which the maximum chloride content may not exceed 250 ppm.

The St. Peter sandstone probably contains water having more than 10,000 ppm total dissolved solids, although its quality would be superior to the quality of water in other deep strata. Total dissolved solids in the Mt. Simon water probably exceed 50,000 ppm. Actual values for total dissolved solids of Mt. Simon water have been reported in the range of 82,000 ppm to 90,000 ppm and the chloride ion content to range from 49,000 ppm to 54,000 ppm.

#### Potential Injection Zones

Injection into strata lying above the New Albany shale has been discounted from consideration because of possible contamination to potable water sources and interference with other operations. In the event that the St. Peter sandstone contains less than 10,000 ppm total dissolved solids, then injection of effluent into any formation above the St. Peter sandstone would be precluded.

The St. Peter sandstone has favorable reservoir characteristics for waste injection. Its porosity and permeability, as measured in a well in Champaign County, averaged 18.4 percent and 404 millidarcys, respectively. The formation is probably from 200 to 250 feet thick at the site. It is overlain by the Glenwood formation and the Platteville group, which probably would afford adequate caprock conditions. As stated earlier, the possible occurrence of formation water having less than 10,000 ppm total dissolved solids may preclude the use of the St. Peter sandstone for waste injection.

The Potosi dolomite may have rather high porosity and permeability as evidenced by the fact that lost circulation problems are common when drilling through this formation. The porosity is secondary in nature, and is the result of solutioning. The pattern of solution cavities is random and variable, so that some wells may encounter several lost circulation zones while others penetrate none or very few. The impermeable Prairie du Chien

*Does also  
fracture*

dolomite overlies the Potosi dolomite, and would provide adequate caprock.

The Ironton-Gallesville sandstone is believed to have favorable characteristics for injection in this area. It is a fine to coarse grained sandstone, poorly cemented, with a minor amount of dolomite. It is probably about 200 feet thick in the site area, and underlies the Franconia formation, a shaly sandstone and dolomite.

The Mt. Simon sandstone probably occurs at a depth of about 4,400 feet. It is probably 1,500 to 2,000 feet thick and rests unconformably upon a Precambrian erosion surface.

Throughout its thickness, the Mt. Simon is a fine to coarse grained sandstone with silica cement. Sorting is poor to good. The quartz grains are very fine to very coarse and are clear to frosted. Published reports state that individual grains often have fracture surfaces. The sandstone is dominantly quartz and lenses and streaks of shale and siltstone do not exceed five percent of the formation.

The porosity of the Mt. Simon has been tested in the Mahomet storage area, and elsewhere. At Mahomet, porosities range from 1.5 percent to 18.8 percent, or higher. Average values are in the range 8.0 percent to 11.8 percent. Permeability is quite variable from 0.000 to 200+ millidarcys and average values are in the range 15 to 31 millidarcys, as shown in Tables I and II. It is difficult to be specific about these values because of rapid variations almost from one foot to another in the section. However, it is substantiated that both porosity and permeability values increase with depth. Table I illustrates this downward increase in values.

The uppermost 60 feet of the Mt. Simon lacks continuity of porosity; it is well cemented and is relatively impermeable. This upper portion should be in itself a good confining stratum. Below this tight zone, average porosities and permeabilities are erratic because of shaliness, poor sorting, cross-laminations, and a variable degree of cementation. For the same reasons, permeabilities do not follow porosities (as might be otherwise expected in sandstone formations).

The shale stringers present in the formation may be expected to restrict the vertical movement of fluids, but not their horizontal movement. On the other hand, some well cemented portions may have vertical fractures which could aid vertical movement of fluids within parts of the formation.

The Eau Claire formation overlies the Mt. Simon sandstone at a depth of approximately 3,800 feet in the Danville area and it should provide an excellent caprock. It consists of shale, siltstone, and dolomite divisible into four recognizable units: an upper zone (145-180 feet) of dolomite, siltstone shale and limestone; a unit (110 feet) consisting of siltstone, shale and dolomite; a thicker unit (140 feet) of soft, fossiliferous green shale; and a lower unit (40 feet) of siltstone and shaly dolomite.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

DIVISION OF LAND/NOISE POLLUTION CONTROL

2200 Churchill Road

Springfield, Illinois 62706

(217) 782-6760

APPLICATION FOR A PERMIT

For Agency Use

FOR WELL INJECTION

Received:

FORM C - SUPPLEMENTAL PERMIT

Reviewed:

Reviewer:

S.P. issued:

S.P. No.:

The applicant shall obtain a Supplemental Permit from the Agency if any alteration or modification of any part of the well injection facility is planned during construction or operation periods, or any change is planned in waste quality or quantity, the operation or monitoring program, or in permit conditions. A Supplemental Permit can be requested by an applicant who has a valid Construction or Operation Permit for a well injection facility.

1. Name of applicant: Allied Chemical Corp. 2. Telephone: 217-446-4700
3. Mailing address: P. O. Box 13 Danville, Illinois 61832
4. Construction or Operation Permit No.: 1979-UIC-3-OP-2
5. Application date: February 6, 1980
6. Explain the purpose of the Supplemental Permit request, attach a copy of text and data, if necessary:

Close present inactive waste holding pond

(16)

7. Signature of applicant:

*W. C. Johnson*

Title: Plant Manager

Date: February 6, 1980

8. Signature of consulting engineer (if needed):

P.E. No.:

Date:

Address:



# Environmental Protection Agency

2200 Churchill Road, Springfield, Illinois 62706

State Senator Max E. Coffey  
Williams G. Stratton Office Building  
Room 109  
Springfield, Illinois 62706

(addressee)

Pursuant to the provisions of Section 1039 of the Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111½, § 1039) you are hereby notified that:

Allied Chemical Corporation Applicant (Person or Company)

P.O. Box 13, Brewer Road Address

Danville, Illinois City & State

has applied to the Agency for a:

- |                                     |                        |
|-------------------------------------|------------------------|
| <input type="checkbox"/>            | 1. Development Permit  |
| <input type="checkbox"/>            | 2. Operation Permit    |
| <input checked="" type="checkbox"/> | 3. Supplemental Permit |
| <input type="checkbox"/>            | 4. Other               |

To:

- |                                     |  |
|-------------------------------------|--|
| <input type="checkbox"/>            | A. Develop a Site  |
| <input type="checkbox"/>            | B. Operate the Site  |
| <input type="checkbox"/>            | C. Modify Site Development                                 |
| <input checked="" type="checkbox"/> | D. Modify Site Operation                                   |
| <input type="checkbox"/>            | E. To Receive Special Waste<br>(generically described as:) |

At:	<u>Danville Works</u>	<u>Site Name</u>
	<u>Brewer Road</u>	<u>Street or Road</u>
	<u>Danville</u>	<u>Near (Municipality)</u>
	<u>Danville, Vermilion, Illinois</u>	<u>City, County, State</u>

If you have any comments, please submit them in writing within thirty-five (35) days for Development and Operation Permits, or twenty-one (21) days for Supplemental Permits to:

Illinois Environmental Protection Agency  
Land Permit Section, Division of Land/Noise Pollution Control  
2200 Churchill Road  
Springfield, Illinois 62706

*Thomas E. Cavanagh Jr.*  
Thomas E. Cavanagh, Jr., Manager  
Land Permit Section  
Division of Land/Noise Pollution Control





# Environmental Protection Agency

2200 Churchill Road, Springfield, Illinois 62706

State Representative Charles M. Campbell  
State House  
Room 2040  
Springfield, Illinois 62706

(addressee)

Pursuant to the provisions of Section 1039 of the Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111 $\frac{1}{2}$ , § 1039) you are hereby notified that:

Allied Chemical Corporation Applicant (Person or Company)

P.O. Box 13, Brewer Road Address

Danville, Illinois City & State

has applied to the Agency for a:

- |                                     |                        |
|-------------------------------------|------------------------|
| <input type="checkbox"/>            | 1. Development Permit  |
| <input type="checkbox"/>            | 2. Operation Permit    |
| <input checked="" type="checkbox"/> | 3. Supplemental Permit |
| <input type="checkbox"/>            | 4. Other               |

To:

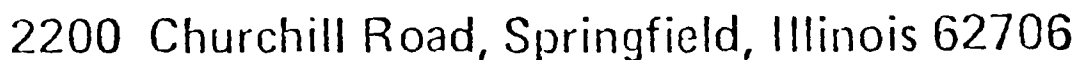
- |                                     |  |
|-------------------------------------|--|
| <input type="checkbox"/>            | A. Develop a Site  |
| <input type="checkbox"/>            | B. Operate the Site  |
| <input type="checkbox"/>            | C. Modify Site Development                                 |
| <input checked="" type="checkbox"/> | D. Modify Site Operation                                   |
| <input type="checkbox"/>            | E. To Receive Special Waste<br>(generically described as:) |

At:	<u>Danville Works</u>	<u>Site Name</u>
	<u>Brewer Road</u>	<u>Street or Road</u>
	<u>Danville</u>	<u>Near (Municipality)</u>
	<u>Danville, Vermilion, Illinois</u>	<u>City, County, State</u>

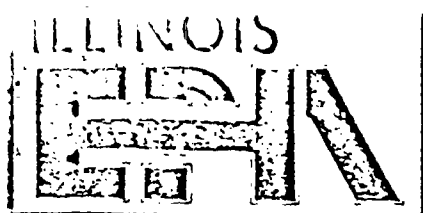
If you have any comments, please submit them in writing within thirty-five (35) days for Development and Operation Permits, or twenty-one (21) days for Supplemental Permits to:

Illinois Environmental Protection Agency  
Land Permit Section, Division of Land/Noise Pollution Control  
2200 Churchill Road  
Springfield, Illinois 62706

*Thomas E. Cavanagh Jr.*  
Thomas E. Cavanagh, Jr., Manager  
Land Permit Section  
Division of Land/Noise Pollution Control



LPC-40 8/79



# Environmental Protection Agency

2200 Churchill Road, Springfield, Illinois 62706

State Representative Harry Woodyard  
William G. Stratton Office Building  
Room 1124-1125  
Springfield, Illinois 62706

(addressee)

Pursuant to the provisions of Section 1039 of the Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111½, § 1039) you are hereby notified that:

Allied Chemical Corporation Applicant (Person or Company)

P.O. Box 13, Brewer Road Address

Danville, Illinois City & State

has applied to the Agency for a:

- |                                     |                        |
|-------------------------------------|------------------------|
| <input type="checkbox"/>            | 1. Development Permit  |
| <input type="checkbox"/>            | 2. Operation Permit    |
| <input checked="" type="checkbox"/> | 3. Supplemental Permit |
| <input type="checkbox"/>            | 4. Other               |

To:

- |                                     |  |
|-------------------------------------|--|
| <input type="checkbox"/>            | A. Develop a Site  |
| <input type="checkbox"/>            | B. Operate the Site  |
| <input type="checkbox"/>            | C. Modify Site Development                                 |
| <input checked="" type="checkbox"/> | D. Modify Site Operation                                   |
| <input type="checkbox"/>            | E. To Receive Special Waste<br>(generically described as:) |

At:	<u>Danville Works</u>	<u>Site Name</u>
	<u>Brewer Road</u>	<u>Street or Road</u>
	<u>Danville</u>	<u>Near (Municipality)</u>
	<u>Danville, Vermilion, Illinois</u>	<u>City, County, State</u>

If you have any comments, please submit them in writing within thirty-five (35) days for Development and Operation Permits, or twenty-one (21) days for Supplemental Permits to:

Illinois Environmental Protection Agency  
Land Permit Section, Division of Land/Noise Pollution Control  
2200 Churchill Road  
Springfield, Illinois 62706

*Thomas E. Cavanagh, Jr.*  
Thomas E. Cavanagh, Jr., Manager  
Land Permit Section  
Division of Land/Noise Pollution Control



# Environmental Protection Agency

2200 Churchill Road, Springfield, Illinois 62706

States Attorney Tom Fahey  
Vermilion County Court House  
7 North Vermilion  
Danville, Illinois 61832

(addressee)

Pursuant to the provisions of Section 1039 of the Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111½, § 1039) you are hereby notified that:

Allied Chemical Corporation Applicant (Person or Company)

P.O. Box 13, Brewer Road Address

Danville, Illinois City & State

has applied to the Agency for a:

- |                                     |                        |
|-------------------------------------|------------------------|
| <input type="checkbox"/>            | 1. Development Permit  |
| <input type="checkbox"/>            | 2. Operation Permit    |
| <input checked="" type="checkbox"/> | 3. Supplemental Permit |
| <input type="checkbox"/>            | 4. Other               |

To:

- |                                     |  |
|-------------------------------------|--|
| <input type="checkbox"/>            | A. Develop a Site  |
| <input type="checkbox"/>            | B. Operate the Site  |
| <input type="checkbox"/>            | C. Modify Site Development                                 |
| <input checked="" type="checkbox"/> | D. Modify Site Operation                                   |
| <input type="checkbox"/>            | E. To Receive Special Waste<br>(generically described as:) |

At:	<u>Danville Works</u>	<u>Site Name</u>
	<u>Brewer Road</u>	<u>Street or Road</u>
	<u>Danville</u>	<u>Near (Municipality)</u>
	<u>Danville, Vermilion, Illinois</u>	<u>City, County, State</u>

If you have any comments, please submit them in writing within thirty-five (35) days for Development and Operation Permits, or twenty-one (21) days for Supplemental Permits to:

Illinois Environmental Protection Agency  
Land Permit Section, Division of Land/Noise Pollution Control  
2200 Churchill Road  
Springfield, Illinois 62706

*Thomas E. Cavanagh Jr.*  
Thomas E. Cavanagh, Jr., Manager  
Land Permit Section  
Division of Land/Noise Pollution Control



# Environmental Protection Agency

2200 Churchill Road, Springfield, Illinois 62706

Fred Van Horne  
Chairman Vermilion County Board  
18 North Walnut  
Danville, Illinois 61832

(addressee)

Pursuant to the provisions of Section 1039 of the Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111½, § 1039) you are hereby notified that:

Allied Chemical Corporation Applicant (Person or Company)

P.O. Box 13, Brewer Road Address

Danville, Illinois City & State

has applied to the Agency for a:

- |                                     |                        |
|-------------------------------------|------------------------|
| <input type="checkbox"/>            | 1. Development Permit  |
| <input type="checkbox"/>            | 2. Operation Permit    |
| <input checked="" type="checkbox"/> | 3. Supplemental Permit |
| <input type="checkbox"/>            | 4. Other               |

To:

- |                                     |  |
|-------------------------------------|--|
| <input type="checkbox"/>            | A. Develop a Site  |
| <input type="checkbox"/>            | B. Operate the Site  |
| <input type="checkbox"/>            | C. Modify Site Development                                 |
| <input checked="" type="checkbox"/> | D. Modify Site Operation                                   |
| <input type="checkbox"/>            | E. To Receive Special Waste<br>(generically described as:) |

At:	<u>Danville Works</u>	<u>Site Name</u>
	<u>Brewer Road</u>	<u>Street or Road</u>
	<u>Danville</u>	<u>Near (Municipality)</u>
	<u>Danville, Vermilion, Illinois</u>	<u>City, County, State</u>

If you have any comments, please submit them in writing within thirty-five (35) days for Development and Operation Permits, or twenty-one (21) days for Supplemental Permits to:

Illinois Environmental Protection Agency  
Land Permit Section, Division of Land/Noise Pollution Control  
2200 Churchill Road  
Springfield, Illinois 62706

*Thomas E. Cavanagh, Jr.*  
Thomas E. Cavanagh, Jr., Manager  
Land Permit Section  
Division of Land/Noise Pollution Control



# Environmental Protection Agency

2200 Churchill Road, Springfield, Illinois 62706

City Clerk Marjorie Kair  
402 North Hazel  
Danville, Illinois 61832

(addressee)

Pursuant to the provisions of Section 1039 of the Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111 $\frac{1}{2}$ , § 1039) you are hereby notified that:

Allied Chemical Corporation Applicant (Person or Company)

P.O. Box 13, Brewer Road Address

Danville, Illinois City & State

has applied to the Agency for a:

- |                                     |                        |
|-------------------------------------|------------------------|
| <input type="checkbox"/>            | 1. Development Permit  |
| <input type="checkbox"/>            | 2. Operation Permit    |
| <input checked="" type="checkbox"/> | 3. Supplemental Permit |
| <input type="checkbox"/>            | 4. Other               |

To:

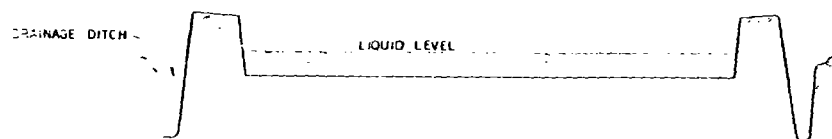
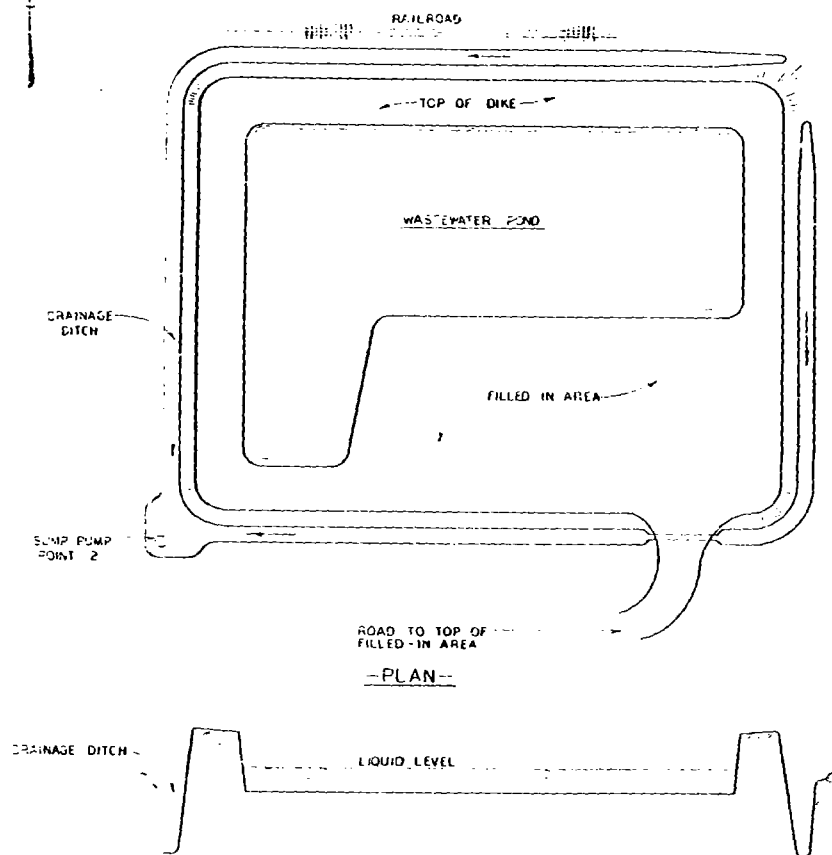
- |                                     |  |
|-------------------------------------|--|
| <input type="checkbox"/>            | A. Develop a Site  |
| <input type="checkbox"/>            | B. Operate the Site  |
| <input type="checkbox"/>            | C. Modify Site Development                                 |
| <input checked="" type="checkbox"/> | D. Modify Site Operation                                   |
| <input type="checkbox"/>            | E. To Receive Special Waste<br>(generically described as:) |

At:	<u>Danville Works</u>	<u>Site Name</u>
	<u>Brewer Road</u>	<u>Street or Road</u>
	<u>Danville</u>	<u>Near (Municipality)</u>
	<u>Danville, Vermilion, Illinois</u>	<u>City, County, State</u>

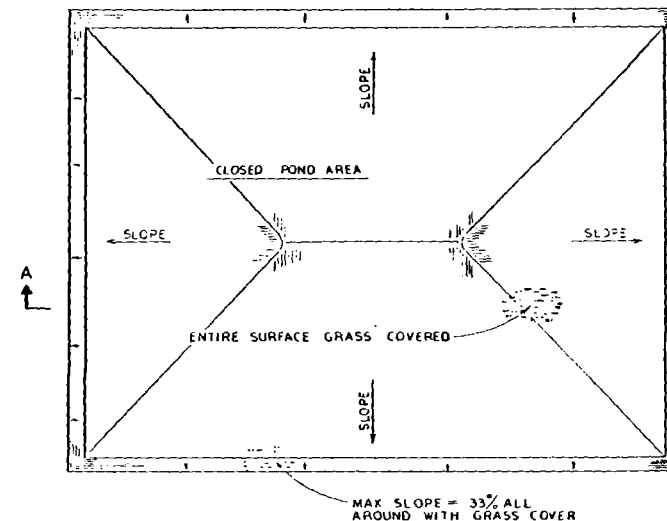
If you have any comments, please submit them in writing within thirty-five (35) days for Development and Operation Permits, or twenty-one (21) days for Supplemental Permits to:

Illinois Environmental Protection Agency  
Land Permit Section, Division of Land/Noise Pollution Control  
2200 Churchill Road  
Springfield, Illinois 62706

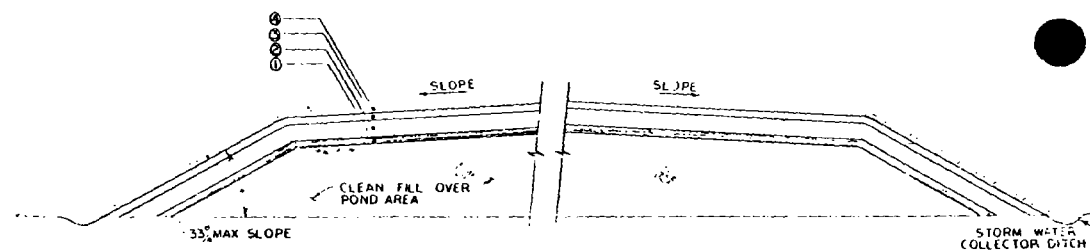
*Thomas E. Cavanagh, Jr.*  
Thomas E. Cavanagh, Jr., Manager  
Land Permit Section  
Division of Land/Noise Pollution Control



CURRENT WASTEWATER POND



-PLAN-



SECTION A-A

PROPOSED WASTEWATER POND CLOSURE DESIGN

- FINAL COVER AS PER RCRA PROPOSED RULES
- REF: FEDERAL REGISTER VOL. 43 NO. 243 12-12-78 250.45-2 (X)
1. 6" CLAY SOIL WITH PERMEABILITY  $< 1 \times 10^{-7}$  CM/SEC.
  2. 12" SOIL CAPABLE OF SUPPORTING INDIGENOUS VEGETATION)
  3. 6" TOP SOIL
  4. GRASS COVER
  5. FINAL GRADE LESS THAN 33%
- 250.45-2 (X)

1	APPROVED TO SHOW SURFACE SLOPES	FILED IN FILE	210								
0	PROPOSED CLOSURE DESIGN	FILED IN FILE	210								
18121	18121	18121	18121								
REFERENCE DRAWING											
CORPORATE ENGINEERING DEPARTMENT											
HUNTSVILLE, NEW JERSEY 08830											
THE PROPOSED WASTEWATER POND CLOSURE DESIGN											
DANVILLE PLANT											
<table border="1"> <tr> <td>DATE</td> <td>12-12-78</td> <td>BY</td> <td>W. J. W.</td> </tr> <tr> <td>DATE</td> <td>12-12-78</td> <td>BY</td> <td>W. J. W.</td> </tr> </table>				DATE	12-12-78	BY	W. J. W.	DATE	12-12-78	BY	W. J. W.
DATE	12-12-78	BY	W. J. W.								
DATE	12-12-78	BY	W. J. W.								
<table border="1"> <tr> <td>DATE</td> <td>12-12-78</td> <td>BY</td> <td>W. J. W.</td> </tr> <tr> <td>DATE</td> <td>12-12-78</td> <td>BY</td> <td>W. J. W.</td> </tr> </table>				DATE	12-12-78	BY	W. J. W.	DATE	12-12-78	BY	W. J. W.
DATE	12-12-78	BY	W. J. W.								
DATE	12-12-78	BY	W. J. W.								
<table border="1"> <tr> <td>DATE</td> <td>12-12-78</td> <td>BY</td> <td>W. J. W.</td> </tr> <tr> <td>DATE</td> <td>12-12-78</td> <td>BY</td> <td>W. J. W.</td> </tr> </table>				DATE	12-12-78	BY	W. J. W.	DATE	12-12-78	BY	W. J. W.
DATE	12-12-78	BY	W. J. W.								
DATE	12-12-78	BY	W. J. W.								